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=> s phthalocyanin? (p) (water solu?)

L1 654 PHTHALOCYANIN? (P) (WATER SOLU?)

=> d hit

L1 ANSWER 1 OF 654 CAPLUS COPYRIGHT 2000 ACS

AB The **water sol.** anionic dye, cobalt

phthalocyanine disulfonate (PcCoDS), was used to prep.
.pi.-electron terminated model monolayers with a high surface free energy.

We report the en face self-assembly of monomeric PcCoDS monolayers on dioctadecyldiammonium bromide (DODAB). Direct surface force measurements showed that the **phthalocyanine** overlayers increased the adhesion between the surfactant membranes in water nearly 100-fold. This increased

attraction correlated with the dye-induced aggregation of DODAB vesicles. Simultaneous force and electronic absorbance measurements indicate that the formation of strong adhesive contacts between the dye layers corresponds with **phthalocyanine** dimerization. Further, the adhesion increased in proportion to the dye coverage, and, at the max. dye

coverage, it is at least as strong as hydrophobic interactions that stabilize the membranes. The surface free energy of PcCoDS/DODA membranes, detd. from JKR anal. of the contact area vs applied load, is 5.2 +/- 0.4 mN m⁻¹. Anal. of the intersurface attraction using Lifschitz

theory for multilayered systems suggests that the dispersion force contributes substantially to the dye interactions. Such forces acting between assemblies of other arom. compds. in water may similarly contribute to the stability of molecularly engineered materials.

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=> s 11 (p) assay

L2 9 L1 (P) ASSAY

=> d ibib hit 1-

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L2 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1998:684455 CAPLUS

DOCUMENT NUMBER: 129:317583

TITLE: Hybrid phthalocyanine derivatives and their uses in immunoassays and nucleic acid assays

INVENTOR(S): Buechler, Kenneth F.; Noar, Joseph B.; Tadesse, Lema

PATENT ASSIGNEE(S): Biosite Diagnostics Incorporated, USA

SOURCE: U.S., 57 pp. Cont.-in-part of U.S. Ser. No. 274,534.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5824799	A	19981020	US 1996-620597	19960322
US 5763189	A	19980609	US 1994-311098	19940923
PRIORITY APPLN. INFO.:				US 1993-126367
				19930924
				US 1993-138708
				19931018
				US 1994-274534
				19940712
				US 1994-311098
				19940923
				US 1995-409825
				19950323

AB **Water sol.** hybrid **phthalocyanine** derivs.

having (1) at least one donor subunit with a desired excitation peak and (2) at least one acceptor subunit with a desired emission peak, wherein the derivs. are capable of intramol. energy transfer from the donor subunit to the acceptor subunit, are synthesized. Such derivs. also may contain an electron transfer subunit. Axial ligands may be covalently bound to the metals contained in the **water sol.** hybrid **phthalocyanine** derivs. Ligands, ligand analogs, polypeptides, proteins, and nucleic acids can be linked to the axial ligands of the

dyes

to form dye conjugates useful in immunoassays and nucleic acid assays.

L2 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1998:95371 CAPLUS

DOCUMENT NUMBER: 128:202442

TITLE: Photosensitization of cells with different metastatic potentials by liposome-delivered

Zn(II)-phthalocyanine

AUTHOR(S): Valduga, Giuliana; Reddi, Elena; Garbisa, Spiridione; Jori, Giulio

CORPORATE SOURCE: Department of Biology, University of Padua (Padova), Padua, 35131, Italy

SOURCE: Int. J. Cancer (1998), 75(3), 412-417
CODEN: IJCNAW; ISSN: 0020-7136

PUBLISHER: Wiley-Liss, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The phototoxicity of liposome-incorporated Zn(II)-**phthalocyanine** (ZnPc) and its **water-sol.** tetrasulfonated deriv. (ZnPcTS) was studied in the tumorigenic but nonmetastatic (RE4) and the highly metastatic (4R) transformed rat embryo fibroblasts. Upon irradiation with 585-605 nm light in the presence of ZnPc, the cell survival drastically decreased, while it was unaffected by ZnPcTS. Enzymic **assays** showed that ZnPc induced about a 60% decrease in the activity of the mitochondrial enzymes NADH and succinate dehydrogenase after 3 min of irradiation, while no significant reduction in the activity of lactate dehydrogenase and lysosomal N-acetyl-.beta.-glucosaminidase was observed. The transport of thymidine, deoxyglucose and .alpha.-aminoisobutyric acid through the plasma membrane was strongly inhibited after irradiation. Similarly, the intracellular ATP content was significantly reduced. The reduction of DNA biosynthesis showed a time dependence quite similar to the photo-induced decrease in cell survival. No repair of cellular functions affected by ZnPc was observed in the 2 cell lines. These results indicate that, under our experimental conditions, hydrophobic ZnPc exerts its cytotoxic activity mainly by impairing those functions localized in the plasma membrane of the cells.

L2 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1996:761698 CAPLUS
DOCUMENT NUMBER: 126:33023
TITLE: Hybrid phthalocyanine derivatives and their uses
INVENTOR(S): Buechler, Kenneth F.; Noar, Joseph B.; Tadesse, Lema
PATENT ASSIGNEE(S): Biosite Diagnostics Incorporated, USA
SOURCE: PCT Int. Appl., 190 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9629367	A1	19960926	WO 1996-US3833	19960322
W:	AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI			
RW:	KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML			
CA 2215727	AA	19960926	CA 1996-2215727	19960322
AU 9653188	A1	19961008	AU 1996-53188	19960322
EP 820489	A1	19980128	EP 1996-909805	19960322
R:	AT, CH, DE, ES, FR, GB, IT, LI, NL			
JP 10508897	T2	19980902	JP 1996-528604	19960322
PRIORITY APPLN. INFO.:			US 1995-409825	19950323
			WO 1996-US3833	19960322

AB **Water-sol.** hybrid **phthalocyanine** derivs., fluorescent latex particles incorporating which are useful in competitive and noncompetitive immunoassays and nucleic acid **assays**, have (1) .gtoreq.1 donor subunit with a desired excitation peak and (2) .gtoreq.1 acceptor subunit with a desired emission peak, and are capable of intramol. energy transfer from the donor subunit to the acceptor subunit. They may also contain an electron-transfer subunit. Axial ligands may be covalently bound to the metals contained in the **water-sol.** hybrid **phthalocyanine** derivs. Ligands, ligand analogs, polypeptides, proteins, and nucleic acids can be linked to the axial ligands of the dyes to form conjugates useful in immunoassays and nucleic acid **assays**.

L2 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1996:228986 CAPLUS
 DOCUMENT NUMBER: 124:337353
 TITLE: Monomeric phthalocyanine reagents
 INVENTOR(S): Schindele, Deborah C.; Pepich, Barry V.; Renzoni, George E.; Fearon, Karen L.; Andersen, Niels H.; Stanton, Thomas H.
 PATENT ASSIGNEE(S): British Technology Group Usa Inc., USA
 SOURCE: U.S., 31 pp. Cont.-in-part of U.S. Ser. No. 241,608.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5494793	A	19960227	US 1989-366971	19890614
US 4803170	A	19890207	US 1986-946475	19861224
US 5135717	A	19920804	US 1989-398433	19890829
US 5346670	A	19940913	US 1992-895601	19920608
PRIORITY APPLN. INFO.:			US 1986-941619	19861215
			US 1986-946475	19861224
			US 1987-61937	19870612
			US 1988-241608	19880908
			US 1989-309453	19890210
			US 1985-732445	19850509
			US 1987-3226	19871112
			US 1989-366971	19890614
			US 1989-398433	19890829

OTHER SOURCE(S): MARPAT 124:337353

AB Fluorescent and/or chromogenic reagents are disclosed in which a **phthalocyanine** deriv. is monomerically conjugated with an antigen, antibody, oligonucleotide, or nucleic acid. Methods are presented in which >90% of the **phthalocyanine** dyes are monomeric when conjugated. This greatly enhances their performance as detectable markers in immunoassays, nucleic acid probe **assays**, immunoblotting, hybridization **assays**, microscopy, imaging, flow cytometry, DNA sequencing, and photodynamic therapy. For use as fluorophores, the free base **phthalocyanine** may or may not be metalated. Metals for fluorescent **phthalocyanine** include aluminum, silicon, phosphorus, gallium, germanium, cadmium, scandium, magnesium, tin, and zinc. For use as chromogens, the **phthalocyanine** may or may not be metalated. For use in aq. soln., the **phthalocyanine** macrocycle should be derivatized with **water-solubilizing** substituents such as sulfonic acid, phosphate, phosphonate, hydroxy, phenoxy, amino, ammonium, or pyridinium groups. To promote disaggregation, metalation with an atom of .++ valence or higher is recommended so that the monomer will take on an axial ligand in aq. soln. For use in enzymic immunoassays and enzymically enhanced nucleic acid probe **assays**, the monomeric **phthalocyanine** deriv. is conjugated via an enzyme-cleavable linkage with the antigen, antibody, oligonucleotide, or nucleic acid. Reversibly quenched embodiments are also provided in which a cleavable linkage joins a fluorescent **phthalocyanine** monomer with another **phthalocyanine**, a heavy metal, or a paramagnetic species.

L2 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1987:530020 CAPLUS
 DOCUMENT NUMBER: 107:130020
 TITLE: Photosensitizing activity of phthalocyanine dyes screened against tissue culture cells
 AUTHOR(S): Chan, W. S.; Marshall, J. F.; Svensen, R.; Phillips, D.; Hart, I. R.
 CORPORATE SOURCE: Imp. Cancer Res. Fund Lab., London, WC2A 3PX, UK
 SOURCE: Photochem. Photobiol. (1987), 45(6), 757-61

DOCUMENT TYPE:

Journal

LANGUAGE:

English

AB A series of **phthalocyanine** (Pc) dyes were screened for their ability to photosensitize murine embryonic fibroblasts or fibrosarcoma cells. Cells were cultured in the presence of the dyes for 24 h, following which they were irradiated with either room light or red light and cultured for a further 72-h period. Eleven water-insol. Pc

(including

a free-base Pc) and 6 **water-sol.** sulfonated derivs.

were screened in this fashion. Free base (H₂) Cu, Cu di-, tri-,

tetrasulfonated (CuS₂, CuS₃, CuS), fluorochromium (FCr) Fe, Co,

tetrasulfonated PdS₄, Ni and tetrasulfonated NiS₄ Pc dyes had no

cytotoxic

activity in these **assays** under conditions of either room-light

or red-light exposure. Mg, Zn and Zr Pc dyes were highly toxic to cells,

producing 0% survival at 72 h following exposure to both light sources.

In contrast, chloroaluminum (ClAl), chloroaluminum sulfonated (ClAlS),

and

dichlorotin (Cl₂,sn) Pc dyes exhibited differential phototoxicity, producing total cell death following red-light irradiation but no or little cytotoxic effect after exposure to room light, raising the possibility that these dyes might prove useful for photodynamic therapy of cancer.

L2 ANSWER 6 OF 9 MEDLINE

ACCESSION NUMBER: 1998115338 MEDLINE

DOCUMENT NUMBER: 98115338

TITLE: Photosensitization of cells with different metastatic potentials by liposome-delivered Zn(II)-phthalocyanine.

AUTHOR: Valduga G; Reddi E; Garbisa S; Jori G

CORPORATE SOURCE: Department of Biology, University of Padua (Padova), Italy.. valduga@civ.bio.unipd.it

SOURCE: INTERNATIONAL JOURNAL OF CANCER, (1998 Jan 30) 75 (3) 412-7.

Journal code: GQU. ISSN: 0020-7136.

PUB. COUNTRY: United States

Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals; Cancer Journals

ENTRY MONTH: 199804

ENTRY WEEK: 19980404

AB The phototoxicity of liposome-incorporated Zn(II)-**phthalocyanine** (ZnPc) and its **water-soluble** tetrasulphonated derivative (ZnPcTS) was studied in the tumorigenic but nonmetastatic

(RE4)

and the highly metastatic (4R) transformed rat embryo fibroblasts. Upon irradiation with 585-605 nm light in the presence of ZnPc, the cell survival drastically decreased, while it was unaffected by ZnPcTS.

Enzymatic **assays** showed that ZnPc induced about a 60% decrease in the activity of the mitochondrial enzymes NADH and succinate dehydrogenase after 3 min of irradiation, while no significant reduction in the activity of lactate dehydrogenase and lysosomal

N-acetyl-beta-glucosaminidase was observed. The transport of thymidine, deoxyglucose and alpha-aminoisobutyric acid through the plasma membrane was strongly inhibited after irradiation. Similarly, the intracellular

ATP

content was significantly reduced. The reduction of DNA biosynthesis showed a time dependence quite similar to the photo-induced decrease in cell survival. No repair of cellular functions affected by ZnPc was observed in the 2 cell lines. These results indicate that, under our experimental conditions, hydrophobic ZnPc exerts its cytotoxic activity mainly by impairing those functions localized in the plasma membrane of the cells.

L2 ANSWER 7 OF 9 BIOSIS COPYRIGHT 2000 BIOSIS

ACCESSION NUMBER: 1998:123945 BIOSIS

DOCUMENT NUMBER: PREV199800123945
TITLE: Photosensitization of cells with different metastatic potentials by liposome-delivered Zn(II)-phthalocyanine.
AUTHOR(S): Valduga, Giuliana (1); Reddi, Elena; Garbisa, Spiridione; Jori, Giulio
CORPORATE SOURCE: (1) Dip. Biol., Univ. Padova, Via Ugo Bassi, 58/B, 35131 Padova Italy
SOURCE: International Journal of Cancer, (Jan. 30, 1998) Vol. 75, No. 3, pp. 412-417.
ISSN: 0020-7136.

DOCUMENT TYPE: Article

LANGUAGE: English

AB The phototoxicity of liposome-incorporated Zn(II)-**phthalocyanine** (ZnPc) and its **water-soluble** tetrasulphonated derivative (ZnPcTS) was studied in the tumorigenic but nonmetastatic (RE4)

and the highly metastatic (4R) transformed rat embryo fibroblasts. Upon irradiation with 585-605 nm light in the presence of ZnPc, the cell survival drastically decreased, while it was unaffected by ZnPcTS. Enzymatic **assays** showed that ZnPc induced about a 60% decrease in the activity of the mitochondrial enzymes NADH and succinate dehydrogenase after 3 min of irradiation, while no significant reduction in the activity of lactate dehydrogenase and lysosomal N-acetyl-beta-glucosaminidase was observed. The transport of thymidine, deoxyglucose and alpha-aminoisobutyric acid through the plasma membrane was strongly inhibited after irradiation. Similarly, the intracellular ATP

content was significantly reduced. The reduction of DNA biosynthesis showed a time dependence quite similar to the photo-induced decrease in cell survival. No repair of cellular functions affected by ZnPc was observed in the 2 cell lines. These results indicate that, under our experimental conditions, hydrophobic ZnPc exerts its cytotoxic activity mainly by impairing those functions localized in the plasma membrane of the cells.

L2 ANSWER 8 OF 9 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1987:382067 BIOSIS
DOCUMENT NUMBER: BA84:68564
TITLE: PHOTSENSITIZING ACTIVITY OF PHTHALOCYANINE DYES SCREENED AGAINST TISSUE CULTURE CELLS.
AUTHOR(S): CHAN W-S; MARSHALL J F; SVENSEN R; PHILLIPS D; HART I R
CORPORATE SOURCE: IMPERIAL CANCER RES. FUND LAB., P.O. BOX 123, LINCOLN'S INN
FIELDS, LONDON WC2A 3PX, UK.
SOURCE: PHOTOCHEM PHOTOBIOLOG, (1987) 45 (6), 757-762.
CODEN: PHCBAP. ISSN: 0031-8655.
FILE SEGMENT: BA; OLD
LANGUAGE: English

AB A series of **phthalocyanine** (Pc) dyes were screened for their ability to photosensitize murine embryonic fibroblasts or fibrosarcoma cells. Cells were cultured in the presence of the dyes for 24 h, following which they were irradiated with either room light or red light and cultured for a further 72-h period. Eleven water-insoluble Pc (including a free-base Pc) and 6 **water-soluble** sulfonated derivatives were screened in this fashion. Free base (H₂), copper (Cu), copper di-, tri, tetra-sulfonated (CuS₂, CuS₃, CuS₄), fluoro chromium (FCr), iron (Fe), cobalt (Co), palladium tetra-sulfonated (PdS₄), nickel (Ni) and nickel tetra-sulfonated (NiS₄) Pc dyes had no cytotoxic activity in these **assays** under conditions of either room-light or red-light exposure. Magnesium (Mg), zinc (Zn) and zirconium (Zr) Pc dyes were highly toxic to cells, producing 0% survival at 72 h, following exposure to both light sources. In contrast, chloroaluminum (ClAl), chloro aluminum sulfonated (ClAlS) and dichloro tin (Cl₂Sn) Pc dyes exhibited

differential phototoxicity, producing total cell death following red-light irradiation but no or little cytotoxic effect after exposure to room light, raising the possibility that these dyes might prove useful for photodynamic therapy of cancer.

L2 ANSWER 9 OF 9 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 1998:113870 SCISEARCH
THE GENUINE ARTICLE: YU408
TITLE: Photosensitization of cells with different metastatic potentials by liposome-delivered Zn(II)-phthalocyanine
AUTHOR: Valduga G (Reprint); Reddi E; Garbisa S; Jori G
CORPORATE SOURCE: UNIV PADUA, DIPARTIMENTO BIOL, VIA UGO BASSI, 58-B, I-35131 PADUA, ITALY (Reprint); UNIV PADUA, IST ISTOL & EMBRIOL, I-35131 PADUA, ITALY
COUNTRY OF AUTHOR: ITALY
SOURCE: INTERNATIONAL JOURNAL OF CANCER, (30 JAN 1998) Vol. 75, No. 3, pp. 412-417.
Publisher: WILEY-LISS, DIV JOHN WILEY & SONS INC, 605 THIRD AVE, NEW YORK, NY 10158-0012.
ISSN: 0020-7136.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 27

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The phototoxicity of liposome-incorporated Zn(II)-**phthalocyanine** (ZnPc) and its **water-soluble** tetrasulphonated derivative (ZnPcTS) was studied in the tumorigenic but nonmetastatic (RE4) and the highly metastatic (4R) transformed rat embryo fibroblasts. Upon irradiation with 585-605 nm light in the presence of ZnPc, the cell survival drastically decreased, while it was unaffected by ZnPcTS. Enzymatic **assays** showed that ZnPc induced about a 60% decrease in the activity of the mitochondrial enzymes NADH and succinate dehydrogenase after 3 min of irradiation, while no significant reduction in the activity of lactate dehydrogenase and lysosomal N-acetyl-beta-glucosaminidase was observed. The transport of thymidine, deoxyglucose and alpha-aminoisobutyric acid through the plasma membrane was strongly inhibited after irradiation. Similarly, the intracellular ATP content was significantly reduced. The reduction of DNA biosynthesis showed a time dependence quite similar to the photo-induced decrease in cell survival. No repair of cellular functions affected by ZnPc was observed in the 2 cell lines. These results indicate that, under our experimental conditions, hydrophobic ZnPc exerts its cytotoxic activity mainly by impairing those functions localized in the plasma membrane of the cells. (C) 1998 Wiley-Liss, Inc.

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=> file caplu, medlin, biosis, scisear

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CA SUBSCRIBER PRICE	0.00	-3.34

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FILE 'CAPLUS, MEDLINE, BIOSIS, SCISEARCH' ENTERED AT 13:15:49 ON 31 JAN 2000
L1 654 S PHTHALOCYANIN? (P) (WATER SOLU?)

FILE 'STNGUIDE' ENTERED AT 13:17:45 ON 31 JAN 2000

FILE 'CAPLUS, MEDLINE, BIOSIS, SCISEARCH' ENTERED AT 13:20:19 ON 31 JAN 2000
L2 9 S L1 (P) ASSAY

FILE 'STNGUIDE' ENTERED AT 13:21:17 ON 31 JAN 2000

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L3 9 L1 (2P) COMPET?

=> d hit

L3 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2000 ACS

AB Cobaltous tetraphenylporphyrin (Co(II)TPP) and cobaltous **phthalocyanine** (Co(II)Pc) complexes were studied in a variety of solvents, including water. The imidazole and nitrosyl adducts were synthesized and characterized by UV-Vis spectrophotometry and ESR spectroscopy. The imidazole adducts were subsequently exposed to nitric oxide to study the **competitive** interactions between nitrosyl and imidazole ligands in these cobaltous compds. This is important, since it has been suggested that aq. solns. of cobaltous porphyrins and **phthalocyanines** can serve as denitrification agents when bound to an immobilized imidazole-modified silica gel (IMSG) substrate. Our results indicate that while nitric oxide binds both Co(II)TPP and Co(II)Pc in org. solvents in the absence of a bound imidazole ligand, it will not bind when imidazole is axially bound to the cobalt ion. Neither Co(II)TPP

nor Co(II)Pc are **water sol.** and both will dimerize in water. A **water sol.** NO sorbent which does not dimerize in water would be ideal for removing NO from flue gas streams. The Co(II)PcTs(IMG) appears to meet these requirements. Preliminary results indicate that aq. suspensions of Co(II)PcTs(IMG) are capable of NO removal from a gas stream passed through these suspensions and may thus be suitable candidates for further development as NO sorbents for NOx abatement.

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L4 6 DUP REM L3 (3 DUPLICATES REMOVED)

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L4 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 1

ACCESSION NUMBER: 1998:357227 CAPLUS

DOCUMENT NUMBER: 129:139994

TITLE: Adducts of nitric oxide with cobaltous tetraphenylporphyrin and phthalocyanines: potential nitric oxide sorbents

AUTHOR(S): Owens, John Wesley; Perry, Mildred; Seybert, David W.

CORPORATE SOURCE: Department of Chemistry, Southern University, Baton Rouge, LA, 70813, USA

SOURCE: Inorg. Chim. Acta (1998), 277(1), 1-7

CODEN: ICHAA3; ISSN: 0020-1693

PUBLISHER: Elsevier Science S.A.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Cobaltous tetraphenylporphyrin (Co(II)TPP) and cobaltous **phthalocyanine** (Co(II)Pc) complexes were studied in a variety of solvents, including water. The imidazole and nitrosyl adducts were synthesized and characterized by UV-Vis spectrophotometry and ESR spectroscopy. The imidazole adducts were subsequently exposed to nitric oxide to study the **competitive** interactions between nitrosyl and imidazole ligands in these cobaltous compds. This is important, since it has been suggested that aq. solns. of cobaltous porphyrins and **phthalocyanines** can serve as denitrification agents when bound to an immobilized imidazole-modified silica gel (IMG) substrate. Our results indicate that while nitric oxide binds both Co(II)TPP and Co(II)Pc

in org. solvents in the absence of a bound imidazole ligand, it will not bind when imidazole is axially bound to the cobalt ion. Neither

Co(II)TPP

nor Co(II)Pc are **water sol.** and both will dimerize in water. A **water sol.** NO sorbent which does not dimerize in water would be ideal for removing NO from flue gas streams. The Co(II)PcTs(IMG) appears to meet these requirements. Preliminary results indicate that aq. suspensions of Co(II)PcTs(IMG) are capable of NO removal from a gas stream passed through these suspensions and may

thus

be suitable candidates for further development as NO sorbents for NOx abatement.

L4 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1996:761698 CAPLUS

DOCUMENT NUMBER: 126:33023

TITLE: Hybrid phthalocyanine derivatives and their uses

INVENTOR(S): Buechler, Kenneth F.; Noar, Joseph B.; Tadesse, Lema

PATENT ASSIGNEE(S): Biosite Diagnostics Incorporated, USA

SOURCE: PCT Int. Appl., 190 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9629367	A1	19960926	WO 1996-US3833	19960322
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML				
CA 2215727	AA	19960926	CA 1996-2215727	19960322
AU 9653188	A1	19961008	AU 1996-53188	19960322
EP 820489	A1	19980128	EP 1996-909805	19960322
R: AT, CH, DE, ES, FR, GB, IT, LI, NL				
JP 10508897	T2	19980902	JP 1996-528604	19960322
PRIORITY APPLN. INFO.:			US 1995-409825	19950323
			WO 1996-US3833	19960322

AB **Water-sol.** hybrid **phthalocyanine** derivs., fluorescent latex particles incorporating which are useful in **competitive** and noncompetitive immunoassays and nucleic acid assays, have (1) .gtoreq.1 donor subunit with a desired excitation peak and (2) .gtoreq.1 acceptor subunit with a desired emission peak, and are capable of intramol. energy transfer from the donor subunit to the acceptor subunit. They may also contain an electron-transfer subunit. Axial ligands may be covalently bound to the metals contained in the **water-sol.** hybrid **phthalocyanine** derivs. Ligands, ligand analogs, polypeptides, proteins, and nucleic acids can be linked to the axial ligands of the dyes to form conjugates useful in immunoassays and nucleic acid assays.

L4 ANSWER 3 OF 6 MEDLINE DUPLICATE 2
 ACCESSION NUMBER: 93376833 MEDLINE
 DOCUMENT NUMBER: 93376833
 TITLE: Inhibition of phthalocyanine-sensitized photohemolysis of human erythrocytes by quercetin.
 AUTHOR: Ben-Hur E; Rosenthal I; Granot Y
 CORPORATE SOURCE: New York Blood Center, NY 10021..
 SOURCE: PHOTOCHEMISTRY AND PHOTOBIOLOGY, (1993 Jun) 57 (6) 984-8.

JOURNAL code: P69. ISSN: 0031-8655.
 PUB. COUNTRY: United States
 Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 ENTRY MONTH: 199312

AB Photohemolysis of erythrocytes in the presence of aluminum **phthalocyanine** tetrasulfonate as a sensitizer is inhibited by quercetin. D2O (98.5%) stimulated photohemolysis regardless of quercetin presence, suggesting the participation of singlet oxygen in the process. Since it has been shown that this flavonoid reacts with singlet oxygen, the protective effect might be attributed, at least partially, to its **competitive** reaction with singlet oxygen. At the molecular level, the alterations of membrane proteins that escort the process of photohemolysis, such as cross-linking of spectrin monomers and of other membrane proteins, were selectively inhibited by quercetin. This effect was qualitatively similar to that induced by NaF, suggesting that quercetin may, like NaF, also inhibit type I photooxidations, which contribute to hemolysis. The lipophilicity of quercetin seems to be an essential factor in the inhibition process; rutin, a **water-soluble** 3-rutinoside of quercetin, had only a negligible protective effect on photohemolysis.

L4 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1993:620628 CAPLUS
DOCUMENT NUMBER: 119:220628
TITLE: Inhibition of phthalocyanine-sensitized
photohemolysis

AUTHOR(S): of human erythrocytes by quercetin
Ben-Hur, E.; Rosenthal, I.; Granot, Y.
CORPORATE SOURCE: New York Blood Cent., New York, NY, 10021, USA
SOURCE: Photochem. Photobiol. (1993), 57(6), 784-8
CODEN: PHCBAP; ISSN: 0031-8655
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Photohemolysis of erythrocytes in the presence of aluminum **phthalocyanine** tetrasulfonate as a sensitizer is inhibited by quercetin (I). D2O (98.5%) stimulated photohemolysis regardless of I presence, suggesting the participation of singlet oxygen in the process. Since it has been shown that this flavonoid reacts with singlet oxygen, the protective effect might be attributed, at least partially, to its **competitive** reaction with singlet oxygen. At the mol. level, the alterations of membrane proteins that escort the process of photohemolysis, such as crosslinking of spectrin monomers and of other membrane proteins, were selectively inhibited by I. This effect was qual.

similar to that induced by NaF, suggesting that I may, like NaF, also inhibit type I photooxidns., which contribute to hemolysis. The lipophilicity of I seems to be an essential factor in the inhibition process; rutin, a **water-sol.** 3-rutinoside of I, had only a negligible protective effect on photohemolysis.

L4 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1990:627898 CAPLUS
DOCUMENT NUMBER: 113:227898
TITLE: Photosensitizing activity of water- and lipid-soluble phthalocyanines on Escherichia coli
AUTHOR(S): Bertoloni, Giulio; Rossi, Francesca; Valduga, Giuliana; Jori, Giulio; Van Lier, Johan
CORPORATE SOURCE: Inst. Microbiol., Univ. Padova, Padova, 35100, Italy
SOURCE: FEMS Microbiol. Lett. (1990), 71(1-2), 149-55
CODEN: FMLED7; ISSN: 0378-1097
DOCUMENT TYPE: Journal
LANGUAGE: English

AB E. coli, like most Gram-neg. bacteria, is insensitive to the photosensitizing action of both lipid-sol. Zinc-**phthalocyanine** (Zn-Pc) and **water-sol.** Zinc-mono/disulfonated **phthalocyanine** (Zn-PcS). Photosensitivity can be induced by alteration of the outer membrane, as obtained by either induction of **competence** or treatment with Tris-EDTA. Both **phthalocyanines** largely bind at the level of the cytoplasmic membrane; however, Zn-PcS shows a superior photosensitizing activity than Zn-Pc. Biochem. analyses performed on irradiated cells suggest that the cytoplasmic membrane is an important target of the photoprocess, while DNA is not involved.

L4 ANSWER 6 OF 6 MEDLINE

ACCESSION NUMBER: 91115055 MEDLINE
DOCUMENT NUMBER: 91115055
TITLE: Photosensitizing activity of water- and lipid-soluble phthalocyanines on Escherichia coli.
AUTHOR: Bertoloni G; Rossi F; Valduga G; Jori G; van Lier J
CORPORATE SOURCE: Institute of Microbiology, University of Padova, Italy.
SOURCE: FEMS MICROBIOLOGY LETTERS, (1990 Sep 1) 59 (1-2) 149-55.
Journal code: FML. ISSN: 0378-1097.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199105

AB Escherichia coli, as most Gram-negative bacteria, is insensitive to the photosensitizing action of both lipid-soluble Zinc-**phthalocyanine** (Zn-Pc) and **water-soluble** Zinc-mono/disulfonated **phthalocyanine** (Zn-PcS). Photosensitivity can be induced by alteration of the outer membrane, as obtained by either induction of **competence** or treatment with Tris-EDTA. Both **phthalocyanines** largely bind at the level of the cytoplasmic membrane; however, Zn-PcS shows a superior photosensitizing activity as compared with Zn-Pc. Biochemical analyses performed on irradiated cells suggest that the cytoplasmic membrane is an important target of the photoprocess, while DNA is not involved.

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FULL ESTIMATED COST	13.70	43.15
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	ENTRY	SESSION
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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jan 28, 2000 (20000128/UP).

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	ENTRY	SESSION
FULL ESTIMATED COST	0.00	43.15
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-6.12

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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jan 28, 2000 (20000128/UP).

=> log hold

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.00	43.15
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-6.12

SESSION WILL BE HELD FOR 60 MINUTES

L2 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 1998:684455 CAPLUS
 DOCUMENT NUMBER: 129:317583
 TITLE: Hybrid phthalocyanine derivatives and their uses in
 immunoassays and nucleic acid assays
 INVENTOR(S): Buechler, Kenneth F.; Noar, Joseph B.; Tadesse, Lema
 PATENT ASSIGNEE(S): Biosite Diagnostics Incorporated, USA
 SOURCE: U.S., 57 pp. Cont.-in-part of U.S. Ser. No. 274,534.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5824799	A	19981020	US 1996-620597	19960322
US 5763189	A	19980609	US 1994-311098	19940923
PRIORITY APPLN. INFO.:			US 1993-126367	19930924
			US 1993-138708	19931018
			US 1994-274534	19940712
			US 1994-311098	19940923
			US 1995-409825	19950323

AB **Water sol.** hybrid **phthalocyanine** derivs.
 having (1) at least one donor subunit with a desired excitation peak and
 (2) at least one acceptor subunit with a desired emission peak, wherein
 the derivs. are capable of intramol. energy transfer from the donor
 subunit to the acceptor subunit, are synthesized. Such derivs. also may
 contain an electron transfer subunit. Axial ligands may be covalently
 bound to the metals contained in the **water sol.** hybrid
phthalocyanine derivs. Ligands, ligand analogs, polypeptides,
 proteins, and nucleic acids can be linked to the axial ligands of the
 dyes
 to form dye conjugates useful in immunoassays and nucleic acid
assays.

L2 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 1996:228986 CAPLUS
 DOCUMENT NUMBER: 124:337353
 TITLE: Monomeric phthalocyanine reagents
 INVENTOR(S): Schindele, Deborah C.; Pepich, Barry V.; Renzoni,
 George E.; Fearon, Karen L.; Andersen, Niels H.;
 Stanton, Thomas H.
 PATENT ASSIGNEE(S): British Technology Group Usa Inc., USA
 SOURCE: U.S., 31 pp. Cont.-in-part of U.S. Ser. No. 241,608.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5494793	A	19960227	US 1989-366971	19890614
US 4803170	A	19890207	US 1986-946475	19861224
US 5135717	A	19920804	US 1989-398433	19890829
US 5346670	A	19940913	US 1992-895601	19920608
PRIORITY APPLN. INFO.:			US 1986-941619	19861215
			US 1986-946475	19861224
			US 1987-61937	19870612
			US 1988-241608	19880908
			US 1989-309453	19890210
			US 1985-732445	19850509
			US 1987-3226	19871112
			US 1989-366971	19890614
			US 1989-398433	19890829

OTHER SOURCE(S): MARPAT 124:337353

AB Fluorescent and/or chromogenic reagents are disclosed in which a **phthalocyanine** deriv. is monomerically conjugated with an antigen, antibody, oligonucleotide, or nucleic acid. Methods are presented in which >90% of the **phthalocyanine** dyes are monomeric when conjugated. This greatly enhances their performance as detectable markers in immunoassays, nucleic acid probe **assays**, immunoblotting, hybridization **assays**, microscopy, imaging, flow cytometry, DNA sequencing, and photodynamic therapy. For use as fluorophores, the free base **phthalocyanine** may or may not be metalated. Metals for fluorescent **phthalocyanine** include aluminum, silicon, phosphorus, gallium, germanium, cadmium, scandium, magnesium, tin, and zinc. For use as chromogens, the **phthalocyanine** may or may not be metalated. For use in aq. soln., the **phthalocyanine** macrocycle should be derivatized with **water-solubilizing** substituents such as sulfonic acid, phosphate, phosphonate, hydroxy, phenoxy, amino, ammonium, or pyridinium groups. To promote disaggregation, metalation with an atom of .++ valence or higher is recommended so that the monomer will take on an axial ligand in aq. soln. For use in enzymic immunoassays and enzymically enhanced nucleic acid probe **assays**, the monomeric **phthalocyanine** deriv. is conjugated via an enzyme-cleavable linkage with the antigen, antibody, oligonucleotide, or nucleic acid. Reversibly quenched embodiments are also provided in which a cleavable linkage joins a fluorescent **phthalocyanine** monomer with another **phthalocyanine**, a

L2 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 1996:761698 CAPLUS
 DOCUMENT NUMBER: 126:33023
 TITLE: Hybrid phthalocyanine derivatives and their uses
 INVENTOR(S): Buechler, Kenneth F.; Noar, Joseph B.; Tadesse, Lema
 PATENT ASSIGNEE(S): Biosite Diagnostics Incorporated, USA
 SOURCE: PCT Int. Appl., 190 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9629367	A1	19960926	WO 1996-US3833	19960322
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML				
CA 2215727	AA	19960926	CA 1996-2215727	19960322
AU 9653188	A1	19961008	AU 1996-53188	19960322
EP 820489	A1	19980128	EP 1996-909805	19960322
R: AT, CH, DE, ES, FR, GB, IT, LI, NL				
JP 10508897	T2	19980902	JP 1996-528604	19960322
PRIORITY APPLN. INFO.:			US 1995-409825	19950323